

CLIMATOLOGICAL DATA FOR APRIL, 1911.

DISTRICT No. 12, COLUMBIA VALLEY.

EDWARD A. BEALS, District Editor.

GENERAL SUMMARY.

April was cold and windy, but with less than the usual amount of precipitation. This is the third consecutive month with a deficiency in precipitation, and as the excess in January was only 0.20 inch the deficiency since the first of the year now averages 4.64 inches. The snow melted so slowly in the foothills that the ground is well soaked with moisture, and the little rain that has fallen since the snow disappeared was largely taken up by the soil instead of running to waste in the streams and causing floods and washouts as so often happens at this season of the year. On this account the weather has not been so unfavorable as would seem to be the case with such a great shortage in rainfall, and vegetation generally is in a thrifty and promising condition. There was more than the usual amount of cloudiness, and notwithstanding the deficiency in rainfall, bright and sunny days were the exception rather than the rule. April of this year, in this district, was more like an ordinary March, and the March preceding with its warm, bright weather was not unlike the usual April. Heavy frosts from the 10th to the 14th were damaging to fruit, and some of the owners of commercial orchards found difficulty in saving their crops where orchard heating is practiced, and where no protective measures were taken the losses were heavy.

The most severe storm of the month was the one on the 9th, when a maximum wind velocity of 71 miles an hour from the southeast occurred at North Head, Wash. No casualties occurred during this gale, beyond the upsetting of a few fishing boats at the mouth of the Columbia River. No lives were lost, and the property damage was insignificant. Another storm of unusual violence began in southwestern Idaho on the afternoon of the 18th and extended to the southeastern portion of that State the next forenoon. The principal features of this storm as experienced at Boise, Idaho, are described by the section director in charge of that station as follows:

The wind changed from a southerly direction into the northwest about 2.30 p. m. on the 18th, and reached a velocity of 37 miles an hour at 2.47 p. m. The high wind did considerable damage to plate glass, and to power and telephone lines. At first the air was filled with flying dust, but rain began at 2.42 p. m., turning to snow at 4 p. m. Snow fell for several hours, but mostly melted as it fell. At 9.06 p. m. the wind again rose, reaching a velocity of 38 miles an hour. The temperature fell from 62° to 34° in about two hours at the beginning of the storm, and the barometer rose 0.20 of an inch in about the same time.

In the southeastern part of the State considerable snow fell on the 20th and 21st, following.

The low stages of the Columbia River at the end of the month caused a great deal of apprehension among the farmers and merchants in the lower valley, as a backward spring with low water in April is usually followed by high water in June due to the quick melting of snow in

the mountains near the headwaters of the main stream, and its principal branches in Montana. If the spring is warm, the snow melts gradually and no flood occurs; but if cold, the warm weather the latter part of May causes a quick rise, and, if the snow remaining in the mountains is heavy, a flood ensues.

TEMPERATURE.

The temperature of the district as determined from 253 stations averaged 45.3°, or about 2.2° below normal. The mean temperatures were highest in the valleys of northeastern Oregon and southeastern Washington, and lowest at the mountain and plateau stations in Idaho, western Montana, and Wyoming. With but few exceptions, all stations in the district report mean temperatures below normal, the greatest departure being -7.3° at Riverside, Oreg. The highest temperature recorded was 90° on the 24th at Beach Creek, Oreg., and the lowest was -11° at Moran, Wyo., on the 14th.

The month began with unusually high temperatures, and at a number of stations the highest temperature of the month occurred on the 1st, but as a rule the maximum temperatures were recorded during the warm period from the 20th to the 25th. The lowest temperatures were recorded during the cool periods from the 5th to the 8th and from the 11th to the 15th.

PRECIPITATION.

The average precipitation, as determined from the records of 359 stations, was 1.37 inches, which is 0.79 inch below the average for the district.

Although deficient, the precipitation was quite well distributed throughout the month, generally, but the greater portion occurred during the first two decades. At only a few stations was there an excess of precipitation for the month. The heaviest precipitation occurred west of the Cascade Mountains in Oregon and Washington; comparatively heavy precipitation also occurred near the headwaters of the branches in northern Idaho and western Montana, and in the middle and upper portions of the Snake River Valley in southern Idaho and western Wyoming.

Some snow fell in nearly all portions of the district, except along the southern Oregon coast, but the greater part occurred in the higher elevations, especially in the eastern portion of the district. The accumulated snow in the mountains is well packed and has been melting very slowly, so that no high water in the streams occurred during the month.

The greatest monthly precipitation was 9.42 inches at Musick, Oreg., in the Umpqua drainage basin, and the least was a trace at six stations. The greatest 24-hour fall was 2.24 inches on the 11th at Musick, Oreg.; other

heavy 24-hour amounts were 2 inches, also at Musick, on the 10th, and at Glenora, Oreg., in the Coast drainage, on the 9th.

THE RIVERS.

The rivers throughout the district were below the normal for the month. The stages reported from the Columbia and Snake Rivers were all higher than those for March, while the upper Willamette and its tributaries showed a slight fall since last month.

The Columbia River averaged 5.1 feet, which is 3.9 feet below the normal for the month, being 5.6 feet below at Cascade Locks and 4.3 feet below at The Dalles. The highest stages all occurred on the 30th and the lowest from the 18th to the 23d. Compared with the mean stage for March the average was 2.4 feet higher.

The Willamette River averaged 4.4 feet, which is 2 feet below the April normal, being 2.5 feet below at Portland and 2.2 feet below at Salem. The mean stage at Portland was slightly higher than that for March, caused by the backwater from the rising Columbia. The highest stage reported was 7.9 feet at Portland on the 30th and the lowest was 1.3 feet at Harrisburg on the 30th.

The Snake River averaged 6.2 feet, which is 2.2 feet below the normal. The highest stage reported was 9.1 feet at Riparia on the 28th and the lowest was 4.4 feet at Lewiston on the 17th. There were no interruptions to navigation during the month.

Owing to the rise in the Columbia River the light-house tender *Heather* has been ordered to begin the work of removing all buoys from the river. The buoys are so anchored that they prove a menace to navigation if left during freshets, being submerged during high water. Their removal does not leave the river without guides, as there are post and range lights to mark the channel,

and as there is an abundance of water during freshet stages, the problem of avoiding shallow water is eliminated.

The Government dredge *Oregon* has completed the work of dredging the channel at Pony Inlet near Marshfield and will be removed to another part of the bay, where a shoal is to be cut away. When this latter work is done the bay channel will have a minimum depth of 18 feet from the C. A. Smith mill to the sea. The dredge will next be taken to the Coquille River for work there.

MISCELLANEOUS PHENOMENA.

Hail and thunderstorms occurred in many sections of the district on the 9th and 27th and in a few places on the 10th, 11th, 12th, and 18th. Light frosts were rather general from the 4th to the 8th and on the 17th, 20th, and 26th. Heavy frosts were recorded in many places on the 5th, 8th, 13th, 14th, and 15th. The following phenomena were recorded at regular Weather Bureau stations: Killing frosts: Lewiston, Idaho, 13th and 14th; Port Crescent, Wash., 5th; Seattle, Wash., 12th and 13th. Sleet: Pocatello, Idaho, 27th; Boise, Idaho, 10th; Seattle, Wash., 11th; Tatoosh Island, Wash., 2d, 10th, 11th, 12th, and 16th. Fog: Portland, Oreg., 8th and 13th; Seattle, Wash., 5th, 8th, 15th, and 30th; Tacoma, Wash., 5th, 8th, and 13th. Auroras: Kalispel, Mont., 8th. High winds were recorded as follows: North Head, Wash., 71 miles southeast on the 9th; Seattle, Wash., 49 miles southwest on the 15th; Pocatello, Idaho, 44 miles southwest on the 18th; Lewiston, Idaho, 47 miles west on the 16th; Boise, Idaho, 38 miles northwest on the 18th; Helena, Mont., 37 miles southwest on the 9th; Spokane, Wash., 34 miles west on the 1st; Portland, Oreg., 30 miles southwest on the 9th.

TABLE 1.—Climatological data for April, 1911. District No. 12, Columbia Valley.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.						Sky.	Prevailing wind direction.	Observers.	
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.	
Montana.																			
Anaconda.	Deer Lodge.	5,300	10								2.30	-0.60	31.0	10	11	10	9	C. D. Demond.	
Bison Mountain.	Powell.	7,240	2								2.35	+ 1.18	11.0	8	6	16	nw.	C. H. Anderson.	
Butte.	Silver Bow.	5,716	17	37.4	- 3.1	65	25	15	7	35								J. R. Wharton.	
Columbia Falls.	Flathead.	3,100	16	41.1	- 1.7	70	21†	15	4	45							s.	J. M. Brist.	
Como †.	Ravalli.	3	3	43.2	-	72	25	20	14	39	1.40	+ 1.18	0.98	5.0	7	10	4	Hiram Platt.	
East Anaconda.	Deer Lodge.	5,300	6	39.9	-	71	24	11	7	49	0.71	-	0.20	12.0	7	11	8	C. D. Demond.	
Fortine.	Lincoln.	2,975	5	39.9	-	71	25	23	12†	38	1.16	-	0.73		3	11	15	Mike Petery.	
Hamilton.	Ravalli.	3,575	8	44.5	-													Bitter Root Valley Irrigation Co.	
Hat Creek.	Powell.	6,000	2								3.33	-	1.33	15.2	16	8	8	M. K. Landreth.	
Kalispell.	Flathead.	2,955	13	42.1	- 0.4	70	20	21	4	38	0.58	- 0.48	0.21	3.3	8	9	11	U. S. Weather Bureau.	
Lost Creek.	Deer Lodge.	5,200	2								1.58	-	0.40	7.0	7	13	10	Frank Henault.	
McGinnis Meadows.	Lincoln.	38.04	2			71‡	24	58‡	14	50‡	0.56	-	0.12	0.7	7	10	6	H. L. Rehee.	
Missoula.	Missoula.	3,225	32	43.2	- 1.7	70	24	21	15	43	0.72	- 0.22	0.33	9				U. S. Weather Bureau.	
Ophir.	Powell.	8,800	2								1.92	-	0.82	7.5	8	6	19	w.	
Ovando.	do.	4,207	12	34.8	- 4.2	65	25	2	6	38	1.46	+ 0.49	0.30	10.2	11	0	0	E. S. Wilton.	
Phillipsburg.	Granite.	5,275	8	40.3‡		70‡	25	13‡	7	48‡	1.48	-	0.60	11.5	5	8	7	S. B. Muchmore.	
Plains.	Sanders.	2,475	13	43.0	- 1.8	71	24	21	7	41	0.30	- 0.21	0.30	0	1	18	0	G. T. Bramble.	
Pleasant Valley.	Flathead.	3,500	4	39.0	-	69	24	15	7	45	0.70	-	0.15	2.5	8	11	M. H. Pierce.		
Polson.	do.	2,920	4	41.6‡		69‡	8	24‡	5†	47‡	0.54	-	0.15	2.0	5		A. D. Stillman.		
Proctor.	do.	2,800	7	38.6‡		70‡	20	19‡	13	40‡	0.13	-	0.05	—	3		F. P. Brown.		
St. Ignatius.	Missoula.	2,700	7	44.1‡		70	20	19‡	7	45‡	1.14	-	0.28	3.0	8	10 ^b	C. E. Proctor.		
St. Regis.	do.	2,650	4														U. S. Reclamation Service.		
Saltse.	do.	3,600	7														R. D. Lee.		
Snowshoe.	Lincoln.	4,500	5	37.4	-	63	21	16	5	32	1.45	-	0.47	9.0	4	21	0	E. K. Tarbox.	
Troy.	do.	1,880	17								1.92	-	0.48	24.5	12	12	3	W. E. Milnor.	
Willow Glen Stock Farm.	Deer Lodge.	5,004	1	36.9	-	68‡	24	8	4	40‡	2.08	-	0.00	12.0	7	11	11	G. E. Luco.	
Wyoming.																			
Afton.	Uinta.	6,200	7	36.4	- 2.3	69	25	5	14	41	1.30	- 0.34	0.40	12.0	13	10	8	A. V. Call.	
Alta.	do.	7,000	1	33.2	-	61	25	—	6	40	2.06	-	0.50	13.7	10	8	6	Mrs. Lucy Brown.	
Bedford.	do.	5,900	11	34.8	- 2.3	66	25†	—	14	40	1.25	- 0.18	0.32	6.9	11	13	6	C. G. Heinier.	
Belcher River.	Yellowstone Park.										1.00	-	0.50	10.0	3	22	0	U. S. Army.	
Moran.	Uinta.										2.72	-	0.69	24.3	9	19	2	U. S. Reclamation Service.	
Snake River.	Yellowstone Park.	7,000	5														U. S. Army.		
Nevada.																			
San Jacinto.	Elko.		6	39.5	-	71	25	5	14	48	0.25	-	0.07	1.0	6	8	10	Moses Jones.	
Utah.																			
Standrod.	Boxelder.		7	41.5	-	72	25	15	13†	33	0.92	-	0.40	1.6	9	13	6	T. B. Jones.	
Idaho.																			
Almo.	Cassia.	3															w.	W. D. Cahoon.	
Albion.	do.	4,650	10															C. E. Bocock.	
Alpha.	Boise.	1	35.8	-	68	24	5	12†	44	1.95	-	0.34	5.6	13	16	8	6	J. W. King.	
American Falls.	Oneida.	19	43.6	- 1.8	72	1†	16	14	47	0.85	- 0.47	0.24	—	8	19	9	2	H. W. Hall.	
Blackfoot.	Bingham.	4,541	15	42.6	- 2.8	76	24	16	15	48	0.56	- 0.19	0.10	T.	9	11	15	E. A. Dowd.	
Blackfoot Dam.	Bannock.	2	34.1	-	64	25	6	14	38	1.70	-	0.55	9.3	9	11	7	N. W. Irselfeld.		
Boeck's Ranch.	Emore.	3,500	2								1.50	-	0.36	5.3	11			W. Bock.	
Bogus Creek.	Boise.	4,200	3															F. P. Ingraham.	
Boise.	Ada.	2,739	25	47.4	- 2.7	74	24	22	13	31	1.59	+ 0.41	0.81	1.0	9	11	7	se.	U. S. Weather Bureau.
Bonner's Ferry.	Bonner.	1,850	2	43.4	-	73	26	19	7	46	0.71	-	0.20	-2.0	6	16	10	P. Moriarty.	
Boulder Mine.	Boise.	4,800	2								2.36	-	0.67	11.7	10	18	8	Hugh Taylor.	
Buhl.	Twin Falls.	3,800	5	46.4‡		80‡	25	19	15	46‡			0.32	1.0	—	16	12	W. H. Heideman.	
Caldwell.	Canyon.	2,372	7	47.8	-	78	25	17	14	44	1.03	-	0.37	0.2	5	13	8	P. Morlarty.	
Camas.	Fremont.	4,815	3	41.5	-	70	1	11	6	45	0.99	-	0.56	0.23	T.	5	8	W. H. Boone.	
Cambridge.	Washington.	2,651	16	46.4	- 3.1	70	23†	16	14	46	1.64	-	0.46	9.2	11	9	16	Mrs. Edna Faulkner.	
Cedar Creek Dam.	Twin Falls.	2									1.74	-	0.56	0.23	T.	5	8	C. H. Shepherd.	
Chesterfield.	Bannock.	5,424	16	40.4	- 0.9	79	1	12	13†	58	0.89	- 0.06	0.26	9.0	9	10	5	R. Hoffman.	
Coeur d'Alene.	Kootenai.	2,157	21															C. S. West.	
Cottonwood Creek.	Bolze.	4,000	2															J. T. Scott.	
Culdesac.	Naz Perce.	1,520	3	48.3	-	80	24	21	14	42	0.60	-	0.40	2.0	2	17	10	F. Hedrick.	
Deary.	Latah.																	R. R. Richmond.	
Dent.	Clearwater.	1,350	6	48.0	-	84	24	22	6	51	0.99	-	0.41	T.	5	13	13	H. P. Henry.	
Driggs.	Fremont.	6,097	5	38.2	-	64	25	—	6	53	1.02	-	0.38	—	4	16	sw.	E. Schuessler.	
Edie.	do.	2	36.2	-	62	25	12	14†	39	0.91	-	0.51	9.4	3	16	11	sw.	W. H. Durrant.	
Emmett.	Canyon.	2,350	5	47.9	-	78	24†	17	13	42	0.93	-	0.49	0	6	13	6	G. B. Edie.	
Fornay.	Lemhi.	14	38.7	- 2.0	72	1	7	14	50				5	9	7	14	C. P. Kar.		
Garden Valley.	Boise.	3,600	4								1.01	-	0.48	1.4	7	12	15	M. B. Merritt.	
Garnet.	Elmore.	2,575	12	50.4	- 3.9	82	25	21	14	40	1.73	+ 1.01	0.80	0.7	18	11	1	Mrs. Gertrude M. Ross.	
Glenns Ferry.	do.	2,569	4	48.4	-	83	25	15	14	50	0.96	-	0.56	0.5	7	18	11	A. A. Kenison.	
Gooding.	Lincoln.	3,572	2	44.6	-	77	25	18	14	44	1.15	-	0.58	7.2	7	15	4	I. E. Perkins.	
Grand Forks.	Shoshone.	3,000	2	40.0‡		72	24	17	7	42‡	1.63	-	0.48	2.0	6			J. Krall, Jr.	
Grandview.	Owyhee.	2	47.8	-	81	25	17	14	49	1.31	-	0.56	0	5	13	6	H. Kottkey.		
Grimes Pass.	Boise.	5,200	2								2.00	-	0.48	12.9	10			N. G. Massey.	
Guffey.	Owyhee.	2,381	3	51.0	-	80	1†	23	14	41	0.91	-	0.41	0	10	18	11	J. M. Clarke.	
Halley.	Blaine.	5,347	9	39.8	-	70	25	12	14	39	1.67	-	0.69	6.5	9	10	Fred Perry.		
Hotspring.	Owyhee.	2,752	6	49.2	-	83	25	19	13	44	1.59	-	0.75	T.	6	15	7	U. S. Forest Service.	
Idaho City.	Boise.	4,000	14								1.02	- 0.24	0.45	5.0	10	12	8	J. M. Hammer.	
Idaho Falls.	Bonneville.	4,742	17	43.0	- 1.1	73	25	15	14	48	0.95	- 0.07</td							

TABLE 1.—Climatological data for April, 1911. District No. 12—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.						Sky.	Prevailing wind direction.	Observers.		
				Mean	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Greatest in 24 hours.	Departure from the normal.	Total snowfall, unmeted.	Number of rainy days, 0.01 inch or more.	Number of partly cloudy days.	Number of cloudy days.			
<i>Idaho—Continued.</i>																				
Mackay.	Custer.	5,397	4	39.6		66	25	15	14	37 ^a				0.44	0.6	9	9	nw.	U. S. Forest Service.	
Meridian.	Ada.	2,657	1	48.2		77	24	18	13	38	0.97			T.	5	5	5	nw.	A. W. Garrett.	
Mess.	Adams.	3,275	2	44.8		72	2	21	12 ^b	38			0.36	4.0	7	13	25	n.	I. S. Carter.	
Middle Fork.	Idaho.	1,280	2	50.2		84	24	28	6 ^c	47	0.72			0.36	4.0	4	8	8	Jos. McGhee.	
Milner.	Twin Falls.	4,110	6	43.3		74	26	16	14	40				T.					J. K. Young.	
Moscow.	Latah.	2,748	20	45.6	-0.4	76	24	20	13	38				T.					University of Idaho.	
Mountain home.	Elmore.	3,150	6	45.1		78	25	15	14	46	1.16			0.36	1.7	7	13	6	Mrs. Ellen Manion.	
Murtaugh.	Twin Falls.	5	42.0 ^d			75	25	11	14	47 ^b	0.29			0.14	2.3	4	13	10	J. E. Steinour.	
Nez Perce.	Lewis.	3,082	2															P. Mitchell.		
Oakley.	Cassia.	4,700	18	43.8	-3.2	76	1	16	13 ^b	43	0.15	-0.71	0.15	0	1	14	11	s.	John Adams.	
O'Hara Bar.	Idaho.	1,400	2															J. D. Agnew.		
Orofino.	Nez Perce.	1,027	8	48.6		84	24	22	14	49	1.14			0.41	2.0	6	14	16	G. Alteneder.	
Payette.	Canyon.	2,159	20	48.0	-3.7	78	17	17	14	48	0.32	-0.45	0.16	T.	4	12	5	13	E. F. Allen.	
Peaceful Valley.	do.	2,325	1												0.40	T.	6	18	2	J. W. Newton.
Pebble.	Bannock.	5,277	2	38.8		75	26	9	13	42	2.07			0.48	10.0	9	10	11	Mrs. Fannie Say.	
Pierson.	Custer.	7,000	3	28.7		58	30	-11	6	50	3.94			1.11	20.0	7	17	2	D. P. Clarke.	
Pine.	Elmore.	4,100	1												0.49	5.8	6	13	Mrs. Jennie Potter.	
Pleasant Valley.	Ada.	3,000	4	45.0		75	24	17	13	38	1.13			0.44	2.5	9	17	3	C. E. Friedrich.	
Pocatello.	Bannock.	4,482	12	43.8	-3.0	73	25	20	14	36	1.58	-0.44	0.51	6.4	10	9	14	7	U. S. Weather Bureau.	
Pocatello Nursery.	do.	5,396	3	38.4		68	25	9	15	1.03	0.24			8	18	0	12	sw.	Mrs. Anna M. Wrensted.	
Poplar.	Bonneville.	3																C. M. Lawrence.		
Porthill.	Bonner.	1,665	20	45.2	-0.5	72	23 ^b	22	7	41	0.11	-0.94	0.11	0	1	19	5	6	H. A. French.	
Powers Ranch.	Boise.	4,300	3											2.26	4.6	8	0	11	Mrs. Mary French.	
Fyle Creek.	do.	3,100	2											0.94	0.37	10	15	3	P. V. Smith.	
Rattlesnake Creek.	Elmore.	4,000	2											2.19	0.6	13	10	10	R. M. Green.	
Richfield.	Lincoln.	2	43.0			73	25	14	14	40	1.07			0.36	4.0	7	15	1	Idaho Irrigation Co.	
Roseworth.	Twin Falls.	3												0.27	1.1	6	3	21	D. B. Hartwell.	
Roseberry.	Boise.	1	33.8 ^e			59	25	0	12	50 ^a	2.68			0.66	10.0	12	10	9	Rev. H. F. Barstow.	
Ruby Creek.	do.	4,400	3											0.19	4.0	7	20	4	O. A. Hatter.	
Rupert.	Lincoln.	4,204	5	42.8		80	25	14	11	51	0.50			1.7	8	9	9	12	Will Parry.	
St. Maries.	Kootenai.	2,203	15	45.0	-2.1	75	24 ^b	24	14	40				0.37	0.6	13	10	10	J. S. Turnbull.	
Salmon.	Lemhi.	4,040	6	43.0		76	25	16	13	43	1.82			0.82	4.2	4	14	3	B. C. d'Easum.	
Salmon River Dam.	Twin Falls.	3	42.6			74	25	15	12 ^b	37	0.96			0.33	1.3	14	8	6	A. M. Gilbert.	
Sandpoint.	Bonner.	2,066	1	44.0		72	24	7	42	69				0.22	T.	5	20	5	J. H. Edgerton.	
Sheep Hill.	Boise.	5,000	3											0.57	10				C. M. Gardner.	
Shoshone.	Lincoln.	3,968	3	43.6		75	25	16	14	38	1.23			0.30	5.7	6	13	16	O. A. Truman.	
Silver City.	Owyhee.	6,280	4											0.52	15.0	12	12	11	A. D. Bradfield.	
Smith Prairie.	Elmore.	5,200	2											0.37	5.2	9			W. W. Newell.	
Smith Ranger Station.	Bonner.	1,900	1															T. D. Crittenden.		
Soldier Creek.	Blaine.	1	36.1			62	25	12	12 ^b	31	1.04			0.41	6	14	5	5	J. E. Minear.	
Spirit Lake ^f .	Kootenai.	1	43.9			77	23	16	7	47	0.64			0.30	6	19	8	3	M. C. Krause.	
Springfield.	Bingham.	4,420	3	42.3		75	25	10	14	51	1.02			0.31	6.2	7	16	3	Mrs. W. A. Edwards.	
Sugar ^g .	Fremont.	4													2.6	7	13	6	Utah-Idaho Sugar Co.	
Sunnyside.	Elmore.	2	45.0			74 ^b	24	18 ^b	13	41 ^b	1.45			0.96	T.	7	21	6	E. A. Wilmot.	
Tripod Mountain.	Boise.	4,300	2											0.73	2.6	7	13	11	Mrs. Verna Paddock.	
Twin Falls.	Twin Falls.	3,825	6	42.5		77	25	14	15	46	0.43			0.21	1.1	8	14	16	J. A. Waters.	
Vernon.	Fremont.	14	40.6	-0.8	69	25	13	14	40	0.93		-0.14		0.47	8.5	5	9	11	A. M. Statery.	
Wallace.	Shoshone.	2,728	4	43.2		75	24	22	6	39	2.05			0.68					U. S. Weather Bureau.	
Wendell.	Lincoln.	3,400	3	45.3		79	25	14	14	44	1.35			0.58	1.0	6	12	8	C. L. Dingler.	
<i>Washington.</i>																				
Aberdeen.	Chehalis.	162	20	44.2	-4.2	73	15	25	13	39	4.41	-2.28	1.11	4.0	9	1	27	2	C. S. Weatherwax.	
Anacortes.	Skagit.	60	17	42.8 ^a		70	20	29	27 ^b	33 ^b	2.81	+ 0.63	1.25	0	7	9 ^b	12 ^b	1 ^b	Douglas Almond.	
Baker.	do.	200	5	49.6		80	30	28	5	43	2.92			0.86	1.6	7	14	9	Robert M. White.	
Bellingham.	Whatcom.	60	16	46.4	-2.6	70	15 ^b	27	5	38	1.96	-0.17	1.12	1.12	7	21	6	3	Sanford B. Mayhew.	
Bellingham (near).	do.	44.2	2			74	30	22	4	40	2.03			1.20	1.0	9	19	10	U. S. Bureau of Plant Industry.	
Beverly.	Grant.	56.2m				85	24	28	14	42 ^a	0.01			0.01	0	1	17	9	se.	
Blaine.	Whatcom.	57	14	44.2	-2.0	72	30	26	5 ^b	41	1.73	-0.92	1.31	0.8	6	13	10	1	sw.	
Blewett.	Chelan.	2,200	1											0.13	0.08	0.5	2	23	John Burnmeister.	
Bremerton.	Kitsap.	30												0.42	6				U. S. Navy Yard.	
Brewster.	Okanogan.	1,620	1	48.4		78	24	24	4	34	0.19			0.17	T.	3	21	9	Mrs. H. F. Bertram.	
Bumping Lake.	Yakima.	3,400																U. S. Reclamation Service.		
Cedar River.	King.	535	4											2.87	6.3	10	12	4	George Landsburg.	
Centralia.	Lewis.	212	18	45.6	-3.8	75	30	25	27	44	0.98	-0.64	0.73	0.83	1.0	8	14	12	I. S. Turner.	
Cheney.	Spokane.	2,351	12	46.0		75	24 ^b	20	11	34	0.08	-0.97	0.03	3	3	14	0	16	State Normal School.	
Cle Elum.	Kittitas.	1,630	12	43.2	-1.1	78	24	17	13	49	0.31	-1.09	0.18	T.	4	21	9	0	J. A. Balmer.	
Clearbrook.	Whitcom.	140	8	44.6		76	30	21	5	46	2.08			1.04	T.	0	7	9	George Gibbs.	
Colfax.	Whitman.	2,300	22												0.10	1.0	1	23	5	W. H. James.
Colville.	Stevens.	1,635	11	46.6	-0.3	76	20 ^b	18	7	52	0.59	-0.37	0.30	3.4	6	14	8	8	W. L. Sax.	
Concordilly.	Okanogan.	2,300	11	45.4	-0.8	77	25	19	13	43	0.23	-0.59	0.18	T.	2	20	4	6	William Baines.	
Cowiche.	Yakima.	48.64	2			81	24	22	11	35 ^b	0.07		0.07	1	11 ^b	13 ^b	4 ^b	nw.	U. S. Reclamation Service.	
Crescent.	Lincoln.	2,250	11											0.13	T.	3	24	5	Otto Wollweber.	
Davenport.	do.	2,450	3	44.8 ^a		71 ^b	20 ^b	17	13	40	0.10			0.10	1.0	1	23	5	James L. Thayer.	
Dayton.	Columbia.	1,700	25	48.4	-0.9	81	24	25	13	45	0.59	-1.27	0.31	0.0	5	14	11	5	W. W. Hendron.	
Detroit.	Mason.	30	3	46.4		75	30	27	5 ^b	44	1.5									

TABLE 1.—*Climatological data for April, 1911. District No. 12—Continued.*

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.								Precipitation, in inches.								Sky.	Prevailing wind direction.	Observers.			
				Mean.	Departure from the normal.		Highest.	Date.	Lowest.	Date.	greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.						
					Highest.	Date.																			
<i>Washington—Contd.</i>																									
La Crosse.	Whitman.	1,400	2	46.9	80	24	14	14	48	0.20	.....	0.10	T.	3	21	4	5	sw.	M. E. Schreck.					
Lake Clealum.	Kittitas.	2,171	2	41.4	72	23	20	13	43	1.20	.....	0.11	0	4	15	11	4	nw.	U. S. Reclamation Service.					
Lake Kachess.	do.	2,235	3	41.4	72	23	20	13	43	1.46	.....	0.50	10.0	4	15	10	5	s.	Do.					
Lake Keechelus.	do.	2,479	3	41.4	72	23	20	13	43	1.46	.....	0.42	14.0	5	11	9	10	w.	Do.					
Lakeside.	Chelan.	1,116	20	50.8 + 0.3	79	24	32	21	37	0.29	- 0.43	0.26	T.	2	9	21	0	w.	W. H. Van Meter.						
Laurel.	Klickitat.	1,900	1	47.6	81	24	20	6	48	0.33	.....	0.33	8.6	5	12	18	0	w.	Mrs. Minnie E. Strout.					
Laurier.	Ferry.	1,644	1	44.2	77	23	20	6	49	1.70	.....	0.09	T.	5	12	7	11	w.	Mrs. J. S. Myers.					
Lester.	King.	1,614	7	44.2	65	15	32	13	22	3.27	.....	0.90	6.0	4	10	6	14	w.	W. W. Clabaugh.					
Lone Tree.	Chehalis.	14	2	45.6	65	15	32	13	22	3.27	.....	0.87	0.5	13	8	14	8	nw.	U. S. Engineer Corps.					
Longmires Springs.	Pierce.	2,800	2	0.50	0.28	0	3	15	10	5	sw.	U. S. Forest Service.				
Lost Creek.	Okanogan.	3,125	2	0.50	0.28	0	3	15	10	5	sw.	P. H. Leese.				
Lucerne.	Chelan.	1,100	4	0.50	0.04	0	2	15	6	9	w.	Mrs. Barbara Schearer.				
McConaughy.	Grant.	50.0	.....	.....	82	24	22	14	42	0.07	.....	0.40	0	3	18	11	1	sw.	Paul M. McCombie.			
McCumber's Ranch.	Yakima.	2,182	2	55.0 - 1.0	88	24	27	13	43	0.21	- 0.37	0.19	T.	9	21	5	0	w.	Mrs. Mary McCumber.						
Mettinger.	Benton.	307	11	55.0 - 1.0	88	24	27	13	43	0.65	.....	0.15	T.	9	21	0	9	nw.	G. H. Mettinger.					
Mount Pleasant.	Clallam.	42.0	.....	.....	62	23	27	13	28	0.65	.....	0.19	0	2	25	5	0	w.	W. M. Dorr.			
Moxee.	Yakima.	1,000	19	49.6 - 0.7	84	24	16	13	50	0.06	- 0.40	0.06	0	1	15	11	4	sw.	H. B. Scudder.						
Newport.	Stevens.	2,400	1	43.4	75	24	16	7	45	0.45	.....	0.19	1.5	5	17	8	5	sw.	C. M. Talmadge.					
North Head.	Pacific.	211	9	44.0 - 3.5	63	15	33	12	19	2.70	- 0.52	0.78	1.0	15	10	8	12	nw.	U. S. Weather Bureau.						
North Townsend.	Stevens.	1,350	12	47.4	80	24	22	5	43	0.75	- 0.28	0.45	0	4	20	5	5	w.	F. G. Jamneck.						
North Yakima.	Yakima.	1,070	2	55.6	84	24	24	13	46	0.11	.....	0.09	0	3	21	3	6	nw.	Albert Bender.					
Nutland.	Klickitat.	2	50.3	81	24	26	5	43	0.07	.....	0.07	1	0	12	7	11	1	n.	Mrs. Ruth J. Shepard.					
Odessa.	Lincoln.	1,540	8	45.4	80	26	10	11	47	T.	.....	T.	T.	0	12	7	11	sw.	W. U. Neely.					
Olga.	San Juan.	50	21	46.2 - 1.8	65	15	32	47	28	1.88	- 0.16	1.10	0	5	17	12	1	sw.	Cecil S. Willis.						
Olympia.	Thurston.	200	33	46.0 - 2.9	74	23	25	14	43	1.64	- 0.15	0.70	1.0	7	17	10	3	nw.	M. O'Connor.						
Omak.	Okanogan.	850	2	.....	.....	.....	.....	.....	.....	.....	.....	0.11	0	3	14	11	5	sw.	W. G. Teit.
Oroville.	do.	923	2	51.5	81	24	21	13	50	.....	.....	0.37	9.8	6	18	10	2	nw.	E. M. Stansbury.				
Peola.	Garfield.	5,000	2	.....	.....	.....	.....	.....	.....	.....	.....	0.83	.....	2	11	4	9	nw.	Samuel Gruell, sr.
Pomeroy.	do.	1,500	19	46.84 - 3.6	79	24	23	7	52d	0.45	- 0.78	0.25	T.	3	11d	6d	9d	w.	Peter McClung.						
Port Crescent.	Clallam.	259	16	40.2 - 4.5	62	23	27	13	30	1.75	- 0.77	0.63	0.8	9	18	4	4	w.	U. S. Weather Bureau.						
Port Townsend.	Jefferson.	80	21	46.0 - 2.5	67	30	31	13	29	1.34	- 0.33	0.52	T.	8	13	4	13	w.	Frank Plummer.						
Pullman.	Whitman.	2,550	19	44.8 - 2.5	73	24	21	13	37	0.27	- 1.12	0.13	0	3	14	11	5	sw.	State Agricultural College.						
Quinault.	Chelan.	300	4	.....	.....	.....	.....	.....	.....	.....	.....	0.50	T.	5	16	10	4	w.	A. V. Higley.
Republic.	Ferry.	2,028	11	42.6 - 2.7	74	24	15	13	47	0.67	.....	0.31	T.	6	19	3	8	sw.	G. B. Stocking.					
Rex Creek.	Chelan.	1,135	4	50.24	76	24	13	32d	T.	.....	0.03	0.03	2	2	1	1	1	n.	J. W. Nicol.					
Ritzville.	Adams.	1,825	12	45.2	86	24	25	14	39	0.32	.....	0.20	0	5	17	7	5	sw.	Agent Northern Pacific Ry.					
Rock Lake.	Whitman.	1,910	5	46.2	81	24	17	13	44 ^a	0.17	.....	0.13	T.	2	20	5	5	sw.	P. M. Ramsey.					
Rosalia.	do.	2,425	19	45.6 - 0.8	74	24	24	13	38	0.33	- 1.08	0.10	0	5	17	7	6	sw.	Hans Mumm.						
Russell's Ranch.	Yakima.	2,870	2	.....	.....	.....	.....	.....	.....	.....	.....	0.50	T.	5	16	10	4	w.	Miss Maggie M. Russell.
Seattle.	King.	123	20	46.6 - 2.8	71	30	31	13	33	1.21	- 1.47	0.82	T.	5	3	19	8	n.	U. S. Weather Bureau.						
Sedro Woolley.	Skagit.	38	14	46.7 - 3.7	76	30	26	13	45	2.28	- 0.91	1.04	T.	8	9	14	7	sw.	Mrs. L. L. Devin.						
Sixprong.	Klickitat.	1,240	4	51.2	86	24	25	14	39	0.32	.....	0.20	0	2	20	3	7	sw.	C. E. Comstock.					
Skagit Power Dam.	Whatcom.	1	47.5	78	30	27	6	43	1.92	.....	0.67	0	8	16	7	7	w.	Skagit Power Co.						
Snohomish.	do.	100	17	46.7 - 2.8	76	30	26	7	43	1.69	- 1.75	0.89	0.4	7	14	8	8	sw.	Warren Dodge.						
Snoqualmie Falls.	King.	667	12	46.9 - 2.8	74	15	26	14	43	2.21	- 1.98	1.10	7.0	9	13	7	10	w.	O. N. Wiswell.						
Snyder's Ranch.	Okanogan.	2,200	2	42.2	75	24	14	13	46	0.13	.....	0.11	0	2	23	7	0	w.	G. M. Snyder.					
Spokane.	Pacific.	16	44.4	43	74	23	27	13	40	5.37	- 2.42	1.73	T.	11	5	18	7	w.	Miss Winifred Eichner.						
State University.	Spokane.	1,943	30	47.2 - 0.5	77	24	28	12	38	0.19	- 1.10	0.08	0.1	5	14	8	8	sw.	U. S. Weather Bureau.						
Stokes Ranch.	King.	170	17	46.2	72	30	31	14	34	1.06	.....	0.71	0	8	13	9	8	s.	University of Washington.					
Sullivan Lake.	Okanogan.	2,870	2	.....	.....	.....	.....	.....	.....	.....	.....	0.11	0.3	1	20	10	0	nw.	Charles G. Gunn.
Summer.	Pierce.	77	3	44.4	75	15	24	6	48	1.45	.....	0.52	0.8	6	16	9	5	w.	U. S. Forest Service.					
Sunnyside.	Yakima.	740	16	50.0 - 1.5	83	24	17	13	49	0.04	- 0.31	0.04	0	1	18	9	3	nw.	H. E. Thompson.						
Tacoma.	Pierce.	213	25	46.1 - 2.8	73	30	34	14	39	1.14	- 1.62	0.53	T.	8	12	9	3	n.	U. S. Reclamation Service.						
Tatoosh Island.	Clallam.	86	26	43.7 - 2.4	55	15	34	10	44	3.03	- 3.28	1.15	T.	11	13	7	10	w.	U. S. Weather Bureau.						
Tieton.	Yakima.	2,000	2	43.8	78	24	21	13	43	0.33	.....	0.19	T.	3	16	11	3	w.	E. H. Twight.					
Tonasket.	Okanogan.	945	2	51.4	81	24	22	5	40	0.33	.....	0.33	0	1	24	5	1	n.	D. W. Dorrance.					
Touchet.	Walla Walla.	556	4	50.2	85	24	21	14	48	0.34	.....	0.27	0	3	21	4	5	sw.	R. H. King.					
Touchet Ridge.	Columbia.	2,500	2	.....	.....	.....	.....	.....	.....	1.95	.....	0.75	21.0	5	20	5	5	sw.	J. C. Wheeler.
Trinidad.	Douglas.	900	7	52.8	83	24	27	17	36	0.02	.....	0.02	0	1	27	2	0	nw.	A. A. Quarnberg.					
Vancouver.	Clarke.	100	36	48.7 - 3.0	81	23	27	13	45	1.68	- 0.88	0.47	T.	7	10	14	6	w.	Miss Gertrude McClinton.						
Vashon Island.	King.	40	22	46.0 - 2.8	70	15	30	14	37	1.12	- 1.90	0.68	T.	6	17	4	9	n.	F. C. Koppen.						
Wahluke.	Grant.	410	7	53.0 - 2.4	83	24	26	6	43	T.	.....	0	18 ^b	4	6	6	6	w.	G. A. Wallace.					
Wallace.	Okanogan.	4,000	2	.....	.....	.....	.....	.....	.....	0.31	.....	0.19	1.5	5	16	9	5	s.	U. S. Weather Bureau.
Walla Walla.	do.	1,000	27	51.6 - 1.2	85	24	31	13	39	0.63	- 1.07	0.44	1.5	5											

TABLE 1.—Climatological data for April, 1911. District No. 12—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.						Sky.	Prevailing wind direction.	Observers.			
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.			
Oregon—Continued.																					
Drain.	Douglas.	300	9	48.0		76	23	27	8†	45	3.43		0.97	1.0	8	7	15	8	w.	Ira Wimberly.	
Echo.	Umatilla.	625	7	51.9		81	28†	25	15	50	0.18		0.18	0	1	18	5	7	w.	R. B. Stanfield.	
Ella.	Morrow.	830	7	49.0		80	24	22	14†	44	0.33		-0.16	0.23	5	23	2	5	sw.	Carl F. Troedson.	
Eugene.	Lane.	449	21	46.6	-3.6	74	1†	26	13	39	2.34		-0.34	0.82	2.0	11	10	13	nw.	F. L. Barker.	
Fairview.	Coos.	142	15	45.4	-4.9	65	1†	28	14	32	3.98		-0.52	0.95	2.0	8	18	1	7	nw.	Wm. Bettys.
Falls City.	Polk.	355	14	45.9	-3.1	78	23	25	13	42	0.33		-3.09	0.27	0	2	17	4	9	w.	Chas. F. Vick.
Forest Grove.	Washington.	220	23	48.2	-1.2	73	23	24	14	46	2.58		-0.29	1.11	0	9	6	12	12	n.	Pacific University.
Gardiner.	Douglas.	72	21	48.0	-2.2	71	14†	30	13	37	4.49		-1.54	1.43	0	9	11	11	8	sw.	J. S. Gray.
Glendale.	do.	1,441	7	51.2		88	23	27	14	50	2.70		-1.10	13.0	6	15	6	6	sw.	B. J. Simpson.	
Glenora.	Tillamook.	575	20	43.6	-4.1	77	23	25	14	46	5.69		-4.47	2.00	4	7	8	7	15	sw.	Mrs. Jennie A. Roher.
Gold Beach.	Curry.	40	10	47.6		66	20†	30	7†	33	3.29		-0.68	1.12	0	6	16	1	6	nw.	C. Dewey.
Granite.	Grant.	4,680	6	37.5	-5.7	67	23	4	13	42	0.30		-0.20	7.0	0	12	8	8	sw.	L. N. Ford.	
Grants Pass.	Josephine.	956	23	49.0	-2.1	56	23	23	14	52	2.63		-0.96	0.64	0	7	14	4	12	sw.	John B. Paddock.
Grass Valley.	Sherman.	2,381	10																	Agent, O.-W. R. & N. Co.	
Headworks.	Clackamas.	719	9	50.3		80	23	33	5†	42	3.17		-2.54	0.80	4.0	9	12	12	6	e.	Portland Waterworks.
Hepner.	Morrow.	1,950	21	46.6	-1.9	80	24	21	13	37	0.26		-0.84	0.13	1.0	3	18	7	5	w.	Ralph M. Kenton.
Hermiston.	Umatilla.	451	4	53.0		89	25	21	14	46	0.20		-0.20	0	1	19	11	0		C. W. Kellogg.	
Hermoso Rio.	Crook.			45.4		82	24	20	13	48	0.76		-0.40	1.7	4	18	6	6		Carl T. Hubbard.	
Hood River.	Hood River.	300	21	48.0	-1.5	80	1	24	14	42	0.10		-1.94	0.10	T	26	2	2	w.	H. L. Hasbrouck.	
Huntington.	Baker.	2,165	10	49.4		78	25†	32	11†	42	0.03		-0.58	0.02	0	2	7	15	8	e.	I. Connell.
Jacksonville.	Jackson.	1,640	23	49.4	-1.6	82	24	27	12†	43	1.72		-0.43	0.56	0.5	7	15	5	10		E. Britt.
Joseph.	Wallowa.	4,400	22	39.8	-2.0	68	1	14	13	38	1.84		+0.45	0.84	10.0	4	15	0	15	n.	F. F. McCully.
Klamath Agency.	Klamath.	4,109	3	44.7		73	25	20	11	44	1.30		-0.90	13.0	2	21	4	5	w.	Edson C. Watson.	
Klamath Falls.	do.	4,100	22	44.6	-2.8	78	23	14	13	42	1.10	+0.19	0.72	4.0	5	19	7	4	nw.	W. H. Heilman.	
LaGrande.	Union.	2,784	24																	W. A. Worstell.	
McKenzie Bridge.	Lane.	1,400	10	45.2		81	24	21	7	48	3.23		-0.82	0.91	5.5	11	13	0	17	sw.	Geo. Frissell.
McMinnville.	Yamhill.	182	24	47.2	-3.1	79	23	25	13	45	2.72		-0.36	0.69	2.0	7	15	6	9	sw.	J. H. Pruett.
Marshfield.	Coos.	34	10	45.6	-4.8	70	14	28	13	38	4.01		-1.10	0	0	13				U. S. Weather Bureau.	
Medford.	Jackson.			50.0		85	24	25	14†	48	1.27		-0.54	0.54	T	8	12	10	8	nw.	Do.
Merrill.	Klamath.	4,070	5	42.9		77	24	17	12	58	0.80		-0.80	0.80	1	7	17	4	9		Mrs. Agnes Ritchson.
Metolius.	Crook.			43.8		84	24	12	13	50	0.02		-0.02	1.0	1	17	7	6	w.	W. E. Lottman.	
Mikkalo.	Gilliam.	1,400	5	47.3		81	24	19	13	40	0.29		-0.23	1.0	2	18	10	2	w.	Frank Little.	
Miramonte Farm.	Clackamas.	195	23	47.5	-3.1	80	23	27	14	46	2.02		-1.06	0.62	T	7	13	6	11	nw.	G. Muecke.
Monroe.	Benton.	350	14	48.0	-2.5	74	15	28	13†	42	3.03	+1.15	0.80	0	8	14	8	8	nw.	L. A. Peek.	
Mount Angel.	Marion.	485	25	48.6	-2.5	75	23†	30	5†	34	2.32	-1.21	0.65	0.5	8	12	9	9	w.	Dr. Urban Fisher.	
Mount Hood.	Hood River.	1,650	1																	S. G. Babson.	
Musick.	Douglas.	5,000	2	37.1		66	23	15	13	29	9.42		-2.24	91.5	12	12	5	13	sw.	Alex. Lundberg.	
Newport.	Lincoln.	69	24	47.0	-2.0	70	14	29	5	36	1.86	-3.80	0.80	0	7	11	9	10	nw.	Wm. Matthews.	
North Bend.	Coos.	20																	High School.		
Paisley.	Lake.	4,500	8	44.6		70	23†	18	12	30	1.24		-0.64		5	16	7	7	w.	E. C. Woodward.	
Paulina.	Crook.	1,070	22	50.7	-0.9	86	24	19	14	51	0.18		-0.20	3.5	6	8	8	14	sw.	Orrin C. Mills.	
Pendleton.	Umatilla.	1,817	3	50.6		84	24	23	13	42	0.50		-0.35	0.15	0	3	21	7	2	w.	E. F. Averill.
Pilot Rock.	Clackamas.	3,879	18	36.4	-2.4	63	15	8	13	35	3.37		-2.51	0.85	26.0	8	15	6	9	sw.	John P. McManus.
Pompeii.	Multnomah.	57	41	48.8	-2.4	79	23	30	13	36	2.11		-0.94	0.65	0	9	11	9	10	nw.	O. C. Yocom.
Portland.	Curry.	80	6	47.0		68	20	30	13	26	4.37		-0.86	0.1	8	19	5	6	n.	U. S. Weather Bureau.	
Port Orford.	Crook.	2,884	15	45.0	-1.5	84	24	14	14	56	0.20	-0.61	0.19	1.0	2	13	7	10		J. D. Loucks.	
Prineville.	Jackson.	2,800	5	45.4		83	24	17	13	50	2.27		-0.62	11.5	8	9	11	10	w.	Geo. Whittles.	
Prospect.	Wasco.	1,360	10	45.1		75	24	20	13†	43	0.45		-0.31	1.5	3	24	3	3	e.	E. F. Graham.	
Ramsey.	Wasco.	3,500	3								0.05		-0.02	4	18	5	7			Mrs. Iva C. Collins.	
Range.	Grant.			44.6		75	24	19	12	37	2.27		-0.35	8.5	6	7	12	11		Mrs. Emma Arbuckle.	
Redmond.	Crook.			44.6		81	24	12	14	57					18	6	0	0	w.	E. E. Foote.	
Richland.	Baker.	2,850	10	46.4		77	23	16	13	41	4.46		-0.26	14	6	10	6	10	sw.	L. G. Morgan.	
Riverside.	Malheur.	3,000	12	41.2	-7.3	80	24†	9	14	49	0.35		-0.10	1.0	4	8	18	3	w.	Mrs. Leah Fairman.	
Roseburg.	Douglas.	510	33	47.8	-3.1	78	23	28	14	46	2.43	-0.05	0.77	2.9	7	11	12		nw.	U. S. Weather Bureau.	
Salem.	Marion.	120	21	49.2	-1.4	76	23	30	13	35	1.83	-1.11	0.56	0	7	14	1	15	nw.	M. P. Baldwin.	
Silver Lake.	Lake.	4,700	14	41.6	-1.2	77	24	13	14	51	1.41	+0.63	0.44	8	9	19	2	6	w.	L. W. Charles.	
Siskiyou.	Douglas.	4,115	3	43.6		75	24	19	12	37	2.27		-0.35	8.5	6	7	12	11		U. S. Weather Bureau.	
Sparta.	Baker.	4,150	20	42.6	-1.1	68	1	14	13	38	0.32	-1.14	0.19	0.4	7	13	11	6	w.	J. A. Wright.	
Stafford.	Clackamas.	400	15	48.0	-2.4	79	23	26	13	41	2.26	-1.24	0.66	0	3					John P. Gage.	
The Dalles.	Wasco.	112	37	52.2	-1.3	80	24	27	14	44	0.21	-0.45	0.20	0	2	22	3	5	w.	S. L. Brooks.	
Toledo.	Lincoln.	75	21	52.0	+ 2.9	76	20	28	5	40	4.14	-1.72	1.10	0	6	23	2	5		C. B. Crosno.	
Umatilla.	Umatilla.	340	23	53.6	-1.0	86	24	25	13	48	0.15	-0.41	0.15	0	1	20	3	7	sw.	Mrs. Helen T. Duncan.	
Vale.	Malheur.	2,242	19	48.6	+ 0.1	81	24	15	14	51	0.24	-0.58	0.08	-0.58	5	16	12	2	ne.	H. P. Osborne.	
Van.	Horne.	3,506	6								2.27		-2.00	3					nw.	Geo. Howe.	
Wallace Orchard.	Polk.	170	2																	Chas. A. Park.	
Wallowa.	Wallowa.	2,935	8	42.4		79	24	16	13	49	0.32		-0.14	4.3	5	6	11	13	nw.	L. J. Coverstone.	
Wamic.	Wasco.	1,500	10	44.1		82	23	12	5†	50	0.26		-0.26	2.5	1						

TABLE 2.—*Daily precipitation for April, 1911. District No. 12, Columbia Valley.*

Stations.	Watershed.	Day of month.																													Total				
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30				
<i>Montana.</i>																																			
Anaconda.....	Missoula.....																																2.30		
Bison Mountain.....	do.....	0.10	0.50	0.60	0.05						0.20																					2.35			
Butte.....	do.....	T.	.20	T.	.05						T.																								
Columbia Falls.....	Flathead.....																																1.46		
Como.....	Bitter Root.....	.07																																	
East Anaconda |||.....	Missoula.....																																		
Fortine.....	Flathead.....	T.	T.	.20	.14						T.	.04	0.03	T.	0.12																		0.71		
Hamilton.....	Bitter Root.....			.10																													1.16		
Hat Creek.....	Missoula.....			.18	.08						.05		.04	.02	.02	0.01	.07															3.33			
Kalispell.....	Flathead.....	T.	.10	.08	T.																											0.58			
Lost Creek.....	Missoula.....			.13	.22						.23																					1.58			
McGinnis Meadows.....	Kootenai.....	0.05	T.	.09																													0.58		
Missoula.....	Missoula.....			.14	.09																												0.72		
Ophir.....	do.....			.16	.02																												1.02		
Orvando.....	do.....			.20	.30	.02	.05																									1.46			
Philipsburg.....	do.....			.20	T.	.01																										1.48			
Plains.....	Columbia.....	T.	T.																														0.30		
Pleasant Valley.....	Kootenai.....			.15	.15																											0.70			
Polson.....	Flathead.....																																0.54		
Proctor.....	do.....	T.		.04	.08																											0.12			
Saint Ignatius.....	do.....																																1.14		
Saint Regis.....	Missoula.....																																		
Saltse.....	do.....			.47	.18	.09	T.																									1.45			
Snowshoe.....	Kootenai.....	0.03	.18																														1.92		
Troy.....	do.....																																		
Willow Glen Stock Farm.....	Missoula.....			.26	T.	.01																										2.08			
<i>Wyoming.</i>																																			
Afton.....	Snake.....			.10	.30																												1.30		
Alta.....	do.....			T.	.35																												2.06		
Bedford.....	do.....			.02	.23																												1.25		
Belcher River.....	do.....																																		
Moran.....	do.....			.69	.62																												2.72		
Snake River.....	do.....																																		
<i>Nevada.</i>																																			
San Jacinto.....	Snake.....			T.	.04	T.																											0.25		
<i>Utah.</i>																																			
Standrod.....	Raft.....			T.	.10																												0.92		
<i>Idaho.</i>																																			
Almo.....	Upper Snake.....																																		
Albion.....	do.....																																		
Alpha.....	Payette.....			.16	.09																														1.95
American Falls.....	Upper Snake.....			.24																													0.85		
Blackfoot |||.....	do.....	T.	.06	.07																													0.56		
Blackfoot Dam.....	do.....			.05	.30																												1.70		
Bock's Ranch.....	Boise.....			.30	.23																												1.50		
Bogus Creek.....	Payette.....																																		
Boise.....	Boise.....			T.	.13	.06																											1.59		
Bonner's Ferry.....	Upper Columbia.....			.04	.14	.06																										0.71			
Boulder Mine.....	Boise.....																																	2.36	
Buhl.....	Upper Snake.....																																		
Caldwell.....	Boise.....			T.	.05	.35																										1.03			
Camas.....	Lost River Region.....																																0.99		
Cambridge.....	Middle Snake.....																																0.64		
Cedar Creek Dam.....	Upper Snake.....			.16	.46																											1.74			
Chesterfield.....	do.....			.03	.06																											0.89			
Coeur d'Alene.....	Upper Columbia.....																																		
Cottonwood Creek.....	Boise.....																																0.60		
Culdesac.....	Clearwater.....																																		
Deary.....	do.....																																	0.99	
Dent.....	do.....																																		
Driggs.....	Upper Snake.....			.06</td																															

TABLE 2.—*Daily precipitation for April, 1911. District No. 12—Continued.*

TABLE 2.—*Daily precipitation for April, 1911. District No. 12—Continued.*

TABLE 2.—*Daily precipitation for April, 1911. District No. 12—Continued.*

TABLE 2.—*Daily precipitation for April, 1911. District No. 12—Continued.*

Stations.	Watershed.	Day of month.																													Total.		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
Oregon—Continued.																																	
Post.....	Deschutes.....			0.03	0.02					0.06	0.09	0.05	0.02						T.		0.01											0.28	
Power House.....	Walla Walla.....									T.	.01	T.																				0.20	
Prineville.....	Deschutes.....									T.	.02	.41																				2.27	
Prospect.....	Rogue.....										.10	.04		T.																		0.45	
Ramsey.....	Columbia.....																																0.05
Range.....	John Day.....																																0.28
Ray Creek.....	Columbia.....									T.	.13	.05		T.	.08	T.															3.72		
Reston.....	Umpqua.....										.25	.43	.03		.02	1.22	.05	.35													0.46		
Richland.....	Snake.....									T.	T.																					0.18	
Riverville.....	Deschutes.....										.12																						0.35
Riverside.....	Malheur.....										.10																						4.75
Rock Creek.....	Willamette.....										.31	.50																				2.43	
Roseburg.....	Umpqua.....										.28	.23																				0.86	
Rosland.....	Deschutes.....																																1.43
Salem.....	Williamette.....										T.	.15	T.																			0.36	
Seneca.....	S. E. Drainage.....																																0.08
Silver Lake.....																																	1.41
Siskiyou.....	Rogue.....																																2.27
Sisters.....	Deschutes.....																																0.97
Sparta.....	Snake.....																																0.32
Stafford.....	Willamette.....																																2.26
Starkey.....	Grande Ronde.....										T.	.15																				0.29	
Sugar Creek.....	Deschutes.....																																0.10
Summit.....	Williamette.....																																3.83
Summit Prairie.....	Deschutes.....																																0.26
Susanville.....	John Day.....																																0.35
Tamarack.....																																	0.41
Telocastet.....	Snake.....																																0.21
The Dalles.....	Columbia.....																																0.47
Tinroof Cabin.....	Umatilla.....																																4.14
Toledo.....	Coast.....																																1.48
Trail.....	Rogue.....																																7.28
Trask.....	Coast.....																																0.15
Umatilla.....	Columbia.....																																0.87
Unity.....	Snake.....																																0.24
Vale.....	Malheur.....																																2.27
Valley Falls.....	S. E. Drainage.....																																0.55
Van.....	Malheur.....																																0.32
Wallace Orchard.....	Williamette.....																																0.26
Wallowa.....	Grande Ronde.....																																0.34
Warmic.....	Deschutes.....																																0.20
Warmspring.....																																	0.45
Wasco.....	Columbia.....																																0.57
Welches.....																																	1.13
Westfall.....	Malheur.....																																
Weston.....	Walla Walla.....																																
Williams.....	Rogue.....																																
Yonna.....	Int. Drainage.....																																

* Precipitation included in that of the next measurement.

† Separate dates of falls not recorded.

|| Precipitation for the 24 hours ending on the morning when it is measured.

T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 3.—Maximum and minimum temperatures at selected stations for April, 1911. District No. 12, Columbia Valley.

Date.	Montana.				Afton, Wyo.	Idaho.																				
	Kalispell.		Missoula.			Boise.		Bonners Ferry.		Hot Spring.		Lewiston.		Mackay.		Meadows.		Pocatello.		Salmon.		Shoshone.		Vernon.		
	Max.	Min.	Max.	Min.		Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	
1.....	60	34	69	34	61	21	72	44	61	35	60	40	73	38	54	32	70	42	68	30	70	32	66	29	61	35
2.....	42	27	61	34	60	25	60	38	49	41	45	36	57	40	62	30	61	40	62	32	61	35	50	28	49	27
3.....	36	25	50	30	57	24	58	37	39	20	66	35	55	39	54	29	58	36	60	30	57	29	57	33	44	29
4.....	34	21	44	30	46	28	49	37	48	27	56	42	52	36	54	25	49	36	50	28	50	32	49	31	45	32
5.....	36	23	40	27	42	28	49	33	58	34	76	36	52	34	59	32	44	23	40	31	40	31	40	30	43	24
6.....	46	25	48	24	45	17	55	30	50	28	57	31	61	30	54	22	48	31	55	22	60	27	47	20	48	22
7.....	53	21	54	21	48	20	59	31	65	19	62	31	64	32	54	22	58	22	56	27	50	28	56	22	58	25
8.....	62	24	68	25	49	13	65	44	63	24	69	31	76	34	61	30	64	24	64	24	66	25	66	28	66	28
9.....	50	32	55	33	53	25	59	44	53	24	71	44	67	50	59	39	60	32	56	39	57	35	50	34	50	34
10.....	52	33	52	33	49	25	53	37	50	20	62	36	56	40	51	36	57	30	53	31	48	32	42	35	42	35
11.....	42	30	42	27	40	24	44	30	40	28	54	32	49	33	54	16	45	28	45	22	50	29	47	28	38	29
12.....	37	28	38	22	30	15	40	26	40	20	46	26	49	31	39	16	33	24	34	18	38	22	44	29	37	25
13.....	45	27	46	25	33	8	47	22	48	28	52	19	55	26	48	16	36	22	43	16	40	20	35	13	43	26
14.....	55	27	53	24	37	5	53	27	44	29	58	21	63	26	31	15	46	20	50	17	51	16	45	12	54	22
15.....	57	26	63	21	48	10	61	35	63	22	62	35	70	31	52	19	56	23	60	20	59	23	45	20	64	26
16.....	60	28	61	25	49	13	65	36	62	25	60	27	67	43	56	23	61	28	64	23	63	28	60	23	59	32
17.....	58	32	60	30	55	19	60	32	67	27	70	30	66	35	54	23	59	38	62	33	56	29	55	35	56	30
18.....	50	30	47	28	57	20	62	32	59	24	67	32	54	45	64	27	65	31	57	26	64	27	57	33	48	33
19.....	63	35	57	32	50	24	51	33	60	30	60	25	63	43	33	24	43	30	51	30	47	27	57	36	58	33
20.....	70	32	69	31	44	18	45	37	71	27	74	30	77	35	43	25	40	29	62	31	42	26	45	18	68	31
Mns...	53.9	30.3	55.8	30.7	50.3	22.4	58.2	36.5	58.4	28.4	64.3	34.1	64.6	38.4	53.5*	26.7*	54.6	33.1	56.9	39.1	56.5	30.6	53.0	28.2	55.7	30.7

Date.	Washington.																								Tatoosh Islands.			
	Aberdeen.		Blaine.		Colville.		Kosmos.		Lakeside.		North Head.		North Yakima.		Odessa.		Port Crescent.		Seattle.		Sixprong.		Spokane.		Tacoma.			
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.		
1.....	52	33	51	42	73	29	60	30	66	46	47	43	80	34	68	32	50	36	49	42	68	38	64	41	55	39	47	41
2.....	59	32	50	33	71	28	54	36	56	32	45	42	60	35	68	24	48	35	51	37	58	31	48	32	51	37	47	35
3.....	47	32	48	33	52	27	45	30	53	36	44	36	55	37	56	24	41	29	48	37	52	38	45	32	44	34	36	
4.....	50	26	48	28	54	26	49	30	53	33	45	33	55	34	57	26	45	29	48	36	51	34	46	32	46	32	46	
5.....	51	28	50	26	58	25	61	29	53	33	46	37	56	28	52	22	47	27	52	34	55	31	47	33	54	30	48	36
6.....	55	32	52	30	57	21	52	24	62	34	47	41	64	25	60	21	48	30	51	34	64	34	55	33	51	31	46	40
7.....	47	26	52	32	64	18	62	34	60	34	46	40	64	30	69	26	46	30	53	36	63	30	57	28	54	35	49	38
8.....	49	34	50	27	74	22	65	28	63	33	48	40	72	30	54	22	47	27	50	34	73	38	69	31	57	32	47	38
9.....	49	36	54	42	62	31	52	40	61	42	48	42	71	45	52	15	48	36	54	43	67	38	58	43	55	42	47	40
10.....	48	34	49	37	55	34	45	33	56	39	46	35	57	39	49	12	47	32	48	30	62	32	53	35	47	34	43	34
11.....	41	31	48	34	48	30	44	32	52	34	41	35	52	29	50	10	46	31	41	34	50	30	44	31	43	34	43	34
12.....	46	28	46	33	47	22	45	32	53	33	42	33	49	26	51	20	43	29	46	34	47	29	43	28	47	31	45	35
13.....	52	25	50	26	56	19	61	29	55	32	46	36	50	24	59	15	45	27	47	31	55	26	49	28	49	31	47	36
14.....	62	26	53	28	64	19	65	24	60	30	55	38	63	25	63	21	48	28	58	32	64	25	56	28	56	30	52	38
15.....	73	34	70	29	68	22	77	31	69	32	63	44	72	28	61	23	58	30	69	36	70	36	65	29	73	34	55	42
16.....	59	39	58	44	68	32	59	34	62	47	46	41	72	44	56	24	48	32	51	42	64	40	58	39	54	42	48	41
17.....	56	30	53	33	64	28	62	34	68	32	48	39	64	35	58	20	49	39	64	31	57	32	55	37	47	38	52	42
18.....	54	36	53	38	54	32	56	38	59	41	47	39	61	46	52	28	49	36	50	38	62	42	50	38	52	41	48	36
19.....	64	30	53	40	61	30	55	35	65	38	47	42	68	39	64	28	48	31	54	39	64	34	54	39	50	41	48	
20.....	68	36	58	32	76	32	74	29	73	37	54	42	76	40	67	30	56	32	63	39	70	38	71	36	63	36	53	41
21.....	54	39	57	37	73	32	64	35	70	37	52	41	76	39	75	37	50	37	61	44	73	42	70	42	63	43	48	42
22.....	58	31	55	39	71	41	81	30	71	47	46	43	74	44	72	35	51											

TABLE 3.—*Maximum and minimum temperatures at selected stations for April, 1911. District No. 12—Continued.*

Date.	Walla Walla, Wash.		Oregon.																			
			Ashland.		Baker.		Eugene.		Gold Beach.		Hermiston.		Marshfield.		Portland.		Prineville.		Roseburg.		The Dalles.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1.....	69	42	75	46	67	34	74	39	70	47	80	36	58	46	61	41	82	28	72	39	79	48
2.....	54	36	65	36	52	31	69	30	57	34	72	31	53	32	52	39	75	27	58	33	65	38
3.....	53	39	70	36	49	32	52	34	57	38	59	36	49	34	48	39	55	28	48	34	56	41
4.....	49	33	49	36	43	31	48	35	57	40	57	36	47	38	50	38	45	30	44	38	54	37
5.....	52	35	51	32	42	24	44	31	57	35	60	30	52	34	57	33	53	32	56	38	57	29
6.....	61	37	55	40	54	20	56	32	52	37	65	26	55	37	57	34	62	27	58	36	55	31
7.....	63	37	69	33	60	23	58	29	58	30	67	29	55	29	59	40	70	18	66	30	65	33
8.....	74	35	65	38	63	30	60	34	52	43	74	28	54	36	55	35	72	25	55	37	70	34
9.....	65	46	54	42	54	37	54	42	54	45	75	41	51	45	54	43	60	18	53	39	61	39
10.....	60	37	53	33	58	30	57	39	54	40	69	41	47	38	48	36	53	32	49	33	62	40
11.....	47	35	41	29	40	23	42	31	53	37	57	27	47	33	44	34	44	19	42	32	51	34
12.....	47	33	43	30	34	18	42	31	51	31	55	34	48	32	44	33	41	19	46	30	50	31
13.....	53	31	53	28	43	15	45	26	53	30	59	23	53	28	49	30	50	16	54	28	55	28
14.....	61	35	69	36	51	18	60	28	65	32	66	21	70	32	65	34	60	14	67	28	65	27
15.....	73	43	71	36	57	22	61	27	63	31	75	24	68	30	73	41	74	18	77	31	73	29
16.....	63	41	65	40	59	33	74	42	55	43	76	43	54	42	56	45	64	34	60	40	70	47
17.....	64	38	69	33	61	24	65	32	62	33	68	31	61	31	60	35	72	17	70	33	67	34
18.....	55	38	57	34	55	31	62	40	53	41	69	48	53	40	54	42	65	37	54	39	67	47
19.....	60	36	58	32	48	30	52	37	56	34	67	37	51	38	58	40	58	25	56	34	62	41
20.....	69	40	72	33	59	32	65	33	66	39	75	31	66	35	74	40	70	25	74	32	74	35
21.....	73	50	70	38	55	35	68	32	66	45	80	40	55	45	61	47	71	38	64	41	41	65
22.....	69	48	68	38	64	37	62	40	56	38	74	49	55	43	61	42	77	24	66	41	70	44
23.....	78	44	78	40	69	39	60	33	64	35	80	32	61	34	79	43	75	24	78	35	79	37
24.....	85	51	81	45	72	38	71	44	.....	.....	86	38	51	47	71	47	84	38	71	41	80	47
25.....	65	44	68	41	63	41	70	40	.....	.....	89	46	53	45	59	43	70	41	61	29	68	37
26.....	65	38	56	42	61	34	58	38	.....	.....	70	38	52	36	60	41	63	37	56	42	68	39
27.....	64	45	50	37	48	38	56	40	.....	.....	70	47	51	37	52	41	54	34	54	42	66	46
28.....	68	42	57	33	53	37	51	38	.....	.....	70	41	52	33	58	43	59	20	57	34	65	45
29.....	71	44	66	31	57	31	56	30	.....	.....	77	32	56	30	64	40	58	29	68	29	72	39
30.....	72	45	69	40	60	31	64	34	.....	.....	70	45	60	41	70	41	61	29	68	37	75	38
Means.....	63.4	39.8	62.2	36.4	54.7	30.0	58.5	34.7	57.9 ^a	37.3 ^b	70.5	35.5	54.6	36.7	58.4	39.2	63.2	26.8	60.0	35.6	66.2	38.1
																					65.5	31.7

^a, ^b, ^c, etc., indicate respectively 1, 2, 3, etc., days missing from the record.^b Data are from standard instruments not supplied by the U. S. Weather Bureau.^c Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.